

# **7th ICA MOUNTAIN CARTOGRAPHY WORKSHOP**

## **MOUNTAIN MAPPING AND GEOSPATIAL INFORMATION RETRIEVAL**

**BORȘA, MARAMUREȘ, ROMANIA, 1-5 September 2010**

ICA- Commission on Mountain Cartography has continued the well-established series of workshops with the 7-th edition in Borșa, Romania, from 1st to 5th September. The workshop was organized by the Sighetu Marmăției Extension of Babeș-Bolyai University. The venue was Hotel Paltiniș, in Borșa Complex at the feet of Rodnei Mountains (2303m) the highest in the Oriental Carpathians. Borșa is situated in the extreme north of Romania, in Maramureș Land, closed by the Rodnei (Pietrosul Peak, 2303m) and Maramureș Mountains (Eastern Carpathians) at an elevation of 850m, with 29 000 inhabitants. Very popular are the springs with mineral carbonated waters. The zone provides facilities for mountaineering, there are marked trails, ski slopes, rope chair. Staying at a small hotel, entirely booked for the workshop, and the rainy weather facilitated the professional interaction and a very fruitful communication in our group.

The workshop reunited participants from eleven countries (Austria, Switzerland, Germany, Greece, Poland, Russia, Slovenia, Spain, Argentina, USA and Romania) mountain cartographers, map designers, practitioners and scientists in the field. Old friends and members have met again in a new setting, the Carpathian Mountains.

Main themes were organized around several aspects of mountain mapping and geospatial information retrieval. The program featured three kinds of presentations: long presentation (ten minutes), short presentations and demos (6 minutes) and posters. The total number of presentations (26) was grouped by the following themes:

- Mapping and GIS applications for mountain regions
- Relief mapping and visualization
- Tourist mapping projects—good practice guide
- 3D mapping
- Topographic mapping
- Visualization, animation, new techniques

The workshop started on Wednesday, September the 1st, with the welcoming meeting at the venue, with speeches from the local organizing committee and Karel Kriz, a short overlook of the program and greetings from the participants.

On Thursday, the workshop fostered the sections on Relief mapping and visualization and Visualization and new techniques, six presentations. The first presenting author was Martin Gamache with a very interesting overlook on "Relief Mapping at National Geographic Magazine: 1970 to Present", a series of published mapping works. Alexandru Petrisor talked about micro-scale geostatistical analysis for development purposes, in a mountain area- Ialomita basin, with some visualization aspects. Jeremias Uffmann presented the new Centennial Edition of the 1908 Alpenverein Map of the Brenta Massif, the work of a team led by Manfred Buchroithner and Thomas Himpel, displayed also in the poster area.

After the break, it was the turn of the new visualization techniques, introduced by Karek Kriz, with a complex work on Cultural History Information System of the Western Himalaya, with demos. Christian Haeberling presented the new the Web-based "interactive SWISS WORLD ATLAS ", with mountain maps for education purposes, and later gave a live, on-line demonstration on the features of the atlas. The session was closed by Fernando Berenguer with a presentation on geoinformation retrieval in ice patch Jou Negro (Picos de Europa-Spain).

In the afternoon, a short walk to Horses waterfall was organized, in order to break the ice among participants, and give the opportunity to have a quick overlook on the region. The local organizers established also a discussion, a forum on the Romanian mountain mapping, with the contribution of the Romanian participants.

The third day, on Friday, 3rd September, it was a full presentation day, with nine long and seven short contributions. Three sections were organized for the longer presentations Mapping and GIS for mountain regions, Topographic mapping and Mapping projects' results. Patrick J. Kennelly opened the floor with a talk about sky models and illumination issues, followed by Dorina Ilies from the team of University of Oradea with problems related to morphostructures mapping in Plopiș Mountain area. Tom Patterson introduced the new site and work from ShadedReliefArchive.com and his work related to the new world map. A new approach on the environmental monitoring, a GIS platform was presented by Ionut Iosifescu. Rock glaciers were the subject of debate in Viktor Kaufmann's presentation. Tomaž Podobnikar had a talk about mountains' peaks determination supported with shapes analysis.

In the section dedicated to topographic mapping, David Schobesberger introduced a topographic overview map of Himachal Pradesh, followed by Dušan Petrovič with the results of airborne laser scanning data in mountain areas and Jacek Drachal with the use of SRTM and MODIS data in Small scale mapping of mountains. Mapping projects' results were highlighted by Lorenz Hurni with the topics in the Atlas of Switzerland 3, several mountain related topics and a short demo. Mountain cartography of the Argentina's mountains was a panorama over the subject in Argentina, different types of maps, scales, and regions covered by Carlos Nelson. Rafał Jońca managed to complete the worldwide 90m digital elevation model (DEM), also presented some features and focuses.

Short presentations have been introduced as Pecha-Kucha since the Lenk workshop, in 2008; the time-pressure problem was solved successfully also in Borșa. Short demonstrations, project results and software applications were organized into two sections:

issues of visualization and modeling for Soca River (Petrovič, Aleš Golja); software application for automated small-scale relief shading (Anna M. Leonowicz, Bernhard Jenny); Natural Earth features and demonstrations (Nathaniel Vaughn Kelso, Tom Patterson) and digital rock drawing (Jürg Gilgen). In the second section of short presentations evolved Nikos Tzelepis with topographic relief characterization of Greek municipalities (for the team Athanassia Darra, Marinos Kavouras, Nikos Tzelepis) and Marianna Serebryakova with a glance over the Russian view on the swiss mountain relief shading techniques and examples.

The workshop hosted also social events and outdoor activities, great opportunity to build scientific debates and future plans. On Friday evening it was a traditional Romanian dinner with folk music and dance demonstrations. Due to the cold and rainy weather, the excursion of Saturday was planned for two different targets: the hardest to Pietrosu Rodnei Peak, 2303m, the highest in the Oriental Carpathians, 14 brave adventurous participants met the first snow this year; and the Lake Izvorul Bistritei and surroundings for the rest of the team also interesting and not so easy as expected.

During the workshop, Commission on Mountain Cartography members discussed the plans and duties for the following period and announced the next workshop in New Zealand.

The local organizing committee would like to thank all the participants for contributions.

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